DOCUMENT RESUME

ED 333 490 CS 507 469

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TITLE Birth Order and Listening: A Preliminary Investigation.
PUB DATE Apr 91
NOTE 22p.; Paper presented at the Annual Meeting of the Southern States Communication Association (Tampa, FL, April 3-7, 1991).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Birth Order; Communication Research; Higher Education; *Interpersonal Communication; *Listening Habits; *Listening Skills; *Siblings; Undergraduate Students
IDENTIFIERS Communication Behavior; Communication Styles; Kentucky Comprehensive Listening Test

ABSTRACT

Listening skills are important in social situations and in the classroom. A study investigated the relationship of birth order and listening. The Kentucky Comprehensive Listening Test was given to 189 undergraduates enrolled in lower division communication courses. Results showed that first-borns in two-sibling families ranked higher than last-borns in short term listening regardless of gender. This was not true, however, for three and four sibling families. In addition, gender played a significant role in the interpretation of communications in the two-sibling families. Results suggest that a spurious variable, which this study failed to isolate, must be responsible for the fact that these findings failed to reproduce themselves in families with more siblings. Walter Toman suggests that the sex of the siblings, spacing of the siblings, and possible sibling losses are important variables to consider. It is possible that sex, sibling size and ordinal position can interact to explain variance in listening behavior, but greater experimental controls must be exerted in future research. (Two tables of data are attached; 64 references are included.) (PRA)

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# BIRTH ORDER AND LISTENING:
# A PRELIMINARY INVESTIGATION

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ABSTRACT:

*While many individual characteristics of communicative behavior have been studied intensively in recent years, little is known of their etiology and internal dynamics. We tend to look into extremely recent characteristics rather than more basic environmental factors in explaining the differences in individual behviors. Birth order is one factor that seems to be importantly related to general tendencies to communicate. Early studies of birth order implicate feelings of power, locus of control, and affiliative tendency. We discovered that birth order does have important effects on the communicative characteristics of an individual. Specifically implicated are mesures of listening tat involve identification of other persons' orientations. Gender orientation is related, at least in a peripheral way.*

## *BIRTH ORDER AND COMMUNICATIVE BEHAVIOR*

The tremendous variety shown by different persons in frequency, types, and duration of communicative behavior is a fascinating phenemenon. People talk too much, too little, or not at all. People vary widely in their ability to encode and decode, to generate messges and to make sense of communication generally. "Individual differences" is a glib explanatory concept for some of this variability, but explanatory schemes are still incomplete. For example, concern for reticence has generated volumes of research on apprehension and related constructs. "Apprehension" is the most prominent mediating variable (McCroskey, 1970, 1977, 1978) but the source of apprehension itself is not well accounted for. Reinforcement (Verplanck, 1955, Bostrom, 1962) surely plays a part, but so do many other factors such as gender and power (Eakins & Eakins, 1978). In general, the *causes* of this variability are not well understood. Basic ability to receive and understand oral messages (listening) would seem to be important as a mediating variable. But sources of differences in this vital characteristic are also not well understood.

One very interesting possibility arises from consideration of the kind of communicative environment each of us experienced at a very early age. This environment is drastically affected by the position of siblings relative to one another--in other words, birth order. A person born first interacts with parents primarily, and the second and third borns face an entirely different situation. If these different environments make fundamental differences in our approach to communicative acts, we would be closer to understanding some of the etiology of communicative interactions.

*General Effects of Birth Order*

In 1927, Alfred Adler proposed that one of the "entrance gates to mental life" is the relationship a child has in relation to his brothers and sisters. As a result, birth order became a serious consideration in individual psychology (Orgler, 1973). Adler believed the child's ordinal position alters the situation in which the child develops, which in turn affected the behavior and perceptual patterns of the children. According to Adler (1927), "We see therefore that the very position of the child in the family may lend shape and color to all the instincts, tropisms, faculties and the like, which he brings with him into the world" (p. 156).

*"Dethronement."*--In brief, Adler believed that the first child is showered with joy and admiration by the parents and grandparents. Every action and growth behavior is heartily encouraged. Adler's hypothesis goes on to state that when the second child is born, this "center of attention" is shifted. The eldest child is no longer the apple of his or her parent's eye, and the first child is "dethroned." The oldest child suffers through feelings of personal tragedy over this loss and may spend the rest of his or her lives trying to regain this loss of power. The second child is never the exclusive center of attention. He or she is always behind in level of development and achievement to the first born and therefore either competes or gives up to frustration. The relative victories (determined by parental attention) between these two will always affect their personalities (Orgler, 1973).

Dethronement feelings for later children are felt as more children enter the family but not as dramatically as the first child. The birth of the last born child (often described as the

youngest) is also seen by Adler to be unique. Never having to suffer dethronement, the youngest is often pampered both by the parents and the other children. Adler believes that the youngest children are best capable achieving extreme success in life if they feel confident within themselves or extreme failure if they feel helpless without constant support (see Orgler, 1973, Adler, 1927).

Adler's general theory is quite interesting, but the evidence for it is scarce. However, in research investigating the "tendency to affiliate," some interesting birth order effects have been observed.

*Birth Order and Affiliation*.--Stanley Schacter (1959) first suggested that birth order could be a possible determinant of a "need to affiliate." In a somewhat bizarre experiment, he created a situation where individuals were told that they were going to be tested to assess their "pain thresholds." Then respondents heard a series of shrieks from the next room, and most felt that the noise was the result of the test that they were about to be subjected. Some simply left. Schacter was satisfied that those remaining were indeed anxious, or at least fearful. He then observed affiliative behavior of these anxious persons. He found that first-borns and only children were more likely to affiliate with other first-borns. Schacter (1959) and Elms (1972) suggested that this greater need to affiliate when fearful stems from the high levels of comfort parents give to first and only-borns when they are hurt or scared. Later-born children are given less attention and therefore do not rely on other people for sources of comfort. Parents may learn later that children are resilient to the minor cuts and bruises of growing up. Schacter (1959) also cited supporting evidence that, as adults, first-borns are more likely to get help from psychologists and psychotherapists and later-borns are more likely to turn to alcohol abuse.

Ernst and Angst's (1983) review of the direct replications of Schacter's experiment cited three studies that supported the idea that first-borns are more likely to exhibit affiliative behavior during feelings of anxiety (Gerard & Rabbie, 1961; Zimbardo & Formica, 1963; Darley & Aronson, 1966). Following these studies, three studies were undertaken which failed to support Schacter's conclusions (Haywood, 1969; Willems, Van Gelderen & Defares, 1972; MacDonald, 1970).

*Related Affiliation Measures*.--If birth order does create affiliative tendencies, then other psychological characteristics related to affiliation should also be implicated. In a test of empathy (an emotional reaction to another's emotions), Stotland, Sherman, and Shaver (1971) suggested that first-borns model themselves after their parents and later-borns are more sibling oriented. Later-borns are, therefore, apt to be more flexible in their interaction with others and able to empathized with peers easier than first-borns. Physiological based tests of this hypothesis proved to be inconclusive and not reproducable. Eysenck and Cookson (1969) used the Eysenck Personality Inventory to test 4,000 British children for extraversion. Birth order proved to be independent of extraversion.

McGurk and Lewis (1972) report that second-born children studied in an experimental setting were more likely to seek help and attention from adults. This seemed to disprove Schacter's notion of the first born seeking more affiliation, but actually does not--these second borns related well to the adults and not to peers, which would be a better definition of affiliation.

Studies using paper and pencil studies of affiliation have yielded mixed results. Dember (1964) used the TAT need-affiliation scale (Heyns, Veroff & Atkinson, 1958) and found

that first borns had higher scores than later borns. However, Conner (1963) used the same scale and found the opposite.

Questionnaire and experimental research by Mehrabian and Ksionsky (1974) found only minor relationships between birth order and affiliation. Contrary to expectations from Schacter's (1959) results, the later-borns expressed a more intimate attitude than the first-born by assuming a closer position--among the first-born, females reported being more prone to talk to strangers than the males. Thus, the sparse results obtained for birth order were quite disappointing and yielded two effects which did not help clarify the already contradictory evidence relating birth order to affiliation (p. 103). These confusing results led Mehrabian and Ksionsky (1974) to conclude that birth-order has been given "undue emphasis in affiliation research" (p. 145).

According to Gaslin (1973), first-borns are more likely to be guided by a need to find love than their younger brothers and sisters. Gaslin warns about over-generalizing based on birth order and prefers to talk about "density" or the manner in which the children are spaced and gender as the salient elements. According to Gaslin, "The first child whose next sibling is 11 months younger than he is in a very different social situation than is the first child whose next sibling is four years younger. The oldest boy with a younger sister is different from the boy with a younger brother, and so on" (p. 807). For example, Gaslin feels high density children receive less attention from their parents and a child from an all-girl family will have vastly different upbringing from a child from an all-boy family and so on.

Throughout the literature, much can be found concerning the interactions between parents and the first-born. Thompson (1974) reports that parents of the first-born are

anxious and unsophisticated. The feelings, consciously or unconsciously, are relayed to the child. With enormous expectations and pressures, the first born may even perceive a competition with the parents. This leads to greater independence, though unrealistic. An interesting study by Baskett (1984) illustrated interactions of first and last borns at home with other family members. Parental behavior was given more attention by the first borns; last borns reacted to other siblings' behavior, as discussed later. Also, oldest children were more likely to receive negative responses concerning behavior emitted from parents and siblings than were the last-borns, although all received equal numbers of positive responses. Receipt of these negative responses could be the root of the first-borns' lesser popularity and greater conformity, leading to more social anxiety.

Burden (1987) reports that parents have highest expectations and aspirations for the first born children's achievement and behavior than for later siblings. Parents' strictness with (but more attention to) the first-born makes him or her more adult oriented (O'Donnell, 1976).

Not everyone is enchanted with studies of birth order--many writers criticize such research based on inconsistent results (Rosenfeld, 1966; Schooler, 1976; Ernst & Angst, 1983; Kohn, 1990). Falbo suggests that the notion that personality is fixed at an early age is simply not true (quoted in Kohn, 1990, p. 34). Ernst and Angst's (1983) review of 1500 birth order studies criticizes the lack of reliability in many of them. They also criticize the lack of rigor in many studies and conclude that birth order effects are of little importance.

In short, while birth order seems to be a logical early determinant of personality, the evidence is mixed. As one reads the research, however, it becomes clear that part of the

problem is the bewildering array of definitions of personality and social interaction that have been tested in this setting. But the most interesting finding, at least for researchers in communication, is the possible relationship between birth order and communication activity. Recall that affiliative tendency was *defined* in terms of communicative behavior, not in expressions of affiliation--in Schacter's studies, the dependent variable was communicative acts. Schacter assumed that this communicative behavior indicated affiliation. However, there is no need to interpret the effect this way. A relationship between birth order and communicative tendencies is at least as interesting (at least to us) as a relationship between birth order and affiliation. The existence of studies, such as Weiss (1965) indicates that birth order and sending behavior certainly have some connection. Many other personal characteristics (or "traits") cause communicative activity, and the relationship among these characteristics and birth order is of great theoretical and practical interest for students of communication.

*Possible Communicative Effects of Birth Order*

Communication, or the lack of it, can be attributed to many different "internal" characteristics. As we mentioned earlier, apprehension is probably the most common. Other characteristic, however, have clear relationhship to the communicative tendency. Obviously listening is one of these.

Some researchers suggest that not all first-borns exhibit the same kinds of aggressive behavior. Leman (1985) contends that there are basically two types of first-borns, communication style. One type is the compliant. These first borns are the "model children", always wanting to please others. They have a strong need for the entire world to approve of their

talk, actions, everything. They tend to "bite the bullet" when confronted with conflict, with stoic self-thinking, "like it or lump it". Dethronement to them is just as real, but they tend to withdraw into their own world, just biding their time until the unpleasantness goes away, or letting the unresolved conflicts build up and "venting" in one grand explosion. The other type is the strong willed/aggressive. These are hard-driving personalities, characteristically stubborn and overachieving. They will let the sibling (or the parents) know immediately what they think or feel . Screaming and hitting are meshed in their daily behavior. Either type seem to be good candidates for future argumentative behavior.

Birth order has been shown to be linked to assertiveness training in prosocial behavior development. However, where assertiveness training stresses exerting one's own rights, prosocial behavior training is more relative to empathy and altruism, "the giver" not necessarily getting anything in return. As reported by Eisenberg (1982), Ugurel-Semin studied children's reasoning about their own prosocial behavior and the stages through which they chronologically progress. Sharing behavior first begins with egocentrism (selfish, confuses self with others), emerging around age seven. At approximately nine years of age, sociocentrism is apparent, or obedience to socially appropriate rules. Maintenance of interpersonal relationships and empathic behaviors appear around age ten and one half. As Eisenberg summarizes, motives children use concerning their helping/sharing behaviors become more altruistic with increasing age.

Unfortunately the literature in communication tells us little about the compulsive talker. Communication researchers have traditionally concerned themselves with reticence, rather than its opposite. Most of us have assumed that since communication is obviously of great value, anything that interferes with it is harmful. A moment's reflection should convince us that talking is not universally admired and at times might actually be harmful.

How does the first born-differ from the normal listener? It would seem that the listening skills that involve relational elements would be the most affected. Measures of listening that are "strictly" cognitive in nature would be less so. While we are interested ultimately in the interplay of all perceptions, motivation, attitudes, and the like, as they relate to birth order, it is specifically the question of "empathic listening" that motivates the current research.

*Method*

In order to investigate the relationship of birth order and listening, it was necessary to measure the various listening skills of a group of respondents. Listening has several components, and some of them could reasonably be related to birth order. We examined the four aspects of listening measured in the Kentucky Comprehensive Listening Test: short-term listening (STL), short-term with rehearsal (STL-R), interpretive listening (INT), and lecture listening (LECT). These four scales have been shown to relate interestingly to a variety of other communicative behaviors (Bostrom, 1990; Sypher, Bostrom & Seibert, 1990).

We use short-term listening when we don't need to keep the information very long--less than 90 seconds. It is usually not necessary to remember an entire speech or lecture. For example, in a typical speech the speaker might illustrate a point with an anecdote. Retention of the point is important, but retention of the anecdote may not be. short-term, and long-term listening ability, but short-term listening ability is not as closely related to intelligence. Keeping information in a rehearsal state is another type of retention. Rehearsal listening occurs when auditors keep something in your mind consciously by

repeating it to themsleves. This ability is quite different from the ability to listen and retain on the immediate short-term.

When we retain something for a long period of time, we are using the long-term memory. Because listening for long-term retention usually occurs in lecture situations, we call this process "lecture listening." Lecture listening typically includes anything we retain longer than one hour. This process is much more difficult than the other two. Information must be transferred from short-term to long-term memory by conscious effort. Long-term memory is activated in numerous ways, but the most typical are association and repetition.

Interpretive listening is simply the process of integrating incoming material with existing schemas. We do this in at least two different ways: (1) by listening to the speaker's voice and watching bodily action, we interpret the intent of the speaker and (2) through our larger schematic structures, we arrive at what we think the message means. Most of the time we listen for more than just information. People use the expanded channel capacity of speech to send more than just words. Interpretive listening is the process by which we detect other meaning from the larger context of the message, and involves interpretive schemas for meaning.

Since STL and STL-R may be fundamental cognitive skills, we would expect birth order to affect interpretive and lecture listening only.

*Participants.*--The Kentucky Comprehensive Listening Test was given to 189 undergraduates enrolled in lower division communication courses. Gender, ordinal position and number of siblings was recorded on a separate instrument. There were 116 female

participants and 73 male participants. In order to participate, the undergraduates had to be from a two, three or four sibling family. Families of this size were selected due to their high rates of occurrence in American society (Toman, 1976). A factorial analysis of variance was undertaken to test for main effects and interactive effects between gender and birth order.

In general, only slight differences were found in listening behavior across the different types (see Tables 1 and 2). In the total sample (Table 1), a significant *F* value (3.59, $p < .05$) was for birth order/gender interaction under lecture listening. First-born males and females had similar scores (9.50 and 9.70, respectively); in contrast, last-born males had a mean of 9.33 but last-born females scored higher--10.66.

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Table 1. about here

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A significant *F* value in the sample (5.82, $p < .05$) appears for gender under interpretive listening. Males scored slightly higher (mean = 5.12) than females (mean = 4.5) (Table 2).

Another significant *F* value (5.86, $p < .05$) was found for birth order in two sibling families in the short term listening category (Table 2). First-borns (mean = 9.73) scored significantly higher than last-borns (mean = 8.98) using the Duncans test ($p < .05$). These results appear logical when one considers the theorized greater dependency first-borns are supposed to have with authority figures and their interest in power relationships. However, this isomorphism does not repeat itself as one looks down Table 2 to the families with larger sibling sizes. Perhaps the theorized tragedy of dethronement is no

longer as keen a player on personality and communicative behavior as the number of siblings increases.

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Table 2. about here

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The strongest *F* value in Study 2 is found in the two sibling family category for interpretive listening (6.31, $p < .01$). Males scored higher (mean = 5.41) than females (mean = 4.49) in the interpretation of the recorded conversations (Duncans test significant at $p < .05$).

*Discussion*

Critics of the birth order variable have suggested that there has been an overemphasis of its use in social science research (Rosenfeld, 1966; Schooler, 1972; Ernst & Angst, 1983; Kohn, 1990). However, little has been said about the direction that this research has taken. Schacter's (1959) results which stimulated so much of this research were found post hoc in an affiliation experiment. Schacter naturally concluded that increased talkativeness among firstborns was an affiliative response. It is possible that Schacter's conclusion that communication behavior and affiliation are synanamous is incorrect.

In addition, birth order and gender orientation might seem to be a productive set of interactive variables. It is possible that masculinity and feminity produce different associational patterns for first and second-borns.

In a discussion of his "duplication theorum," Walter Toman's (1976) stated that "other things being equal, new social relationships are more enduring and successful, the more they resemble the earlier and earliest (intrafamilial) social relationships of the persons involved" (p.80). In his studies of the "family costellation," Toman concluded that (among several other variables) gender, ordinal posisiton and family size are influential in the way we relate to people in later life. In an experimental setting using recordings, Weiss (1966) concluded that first-borns exhibited greater affiliative tendencies toward lectures than later later-borns.

First-borns in two sibling families ranked higher than last-borns in short term listening regardless of gender but this is not true for three and four sibling families. Also gender plays a significant role in the interpretation of communications in the two sibling families. Why do these finding fail to reproduce themselves in the families with more siblings? The results suggest that a spurious variable must be at play for which this study failed to isolate. Toman (1976) suggests that the sex of the siblings (for example the eldest sister of two brothers), spacing of the siblings and possible sibling losses are important variables to consider. The authors suggest that sex, sibling size and ordinal position can interact to explain variance in listening behavior but that greater experimental controls must be exerted in the future.

Table 1

*F* Values for Kentucky Comprehensive Listening Test Scores as a Function of Birth Order and Birth Order/Gender Interaction

| *Total Sample*[a] | *STL* | *STL-R* | *INTERP* | *LECT* |
|---|---|---|---|---|
| Birth Order[b] | 1.11 | 0.60 | 0.93 | 0.41 |
| Gender | 0.91 | 2.82 | 5.82*[c] | 1.91 |
| Birth Order x Gender | 0.51 | 1.31 | 1.94 | 3.59*[d] |

*$p < .05$

[a] $\underline{n} + 189$

[b] Separated by firstborns, middleborns and lastborns.

[c] $\omega^2 = .55$

[d] $\omega^2 = .47$

Table 2

*F* Values for Kentucky Comprehensive Listening Test Scores as a Function of Birth Order and Birth Order/Gender Interaction by Families with 2, 3, and 4 Siblings

| | *n* | STL | STL-R | Interp | LECT |
|---|---|---|---|---|---|
| Two Siblings | | | | | |
| Birth Order | 84 | 5.86[a] | 1.26 | 0.24 | 3.10 |
| Gender | | 0.52 | 1.54 | 6.31[b] | 0.52 |
| Birth Order X Gender | | 0.05 | 2.19 | 0.46 | 2.19 |
| Three Siblings | | | | | |
| Birth Order | 58 | 0.17 | 0.63 | 0.36 | 0.89 |
| Gender | | 0.48 | 0.49 | 1.53 | 4.89[c] |
| Birth Order X Gender | | 0.05 | 0.27 | 1.21 | 1.07 |
| Four Siblings | | | | | |
| Birth Order | 31 | 0.68 | 1.24 | 1.55 | 0.33 |
| Gender | | 0.01 | 3.08 | 0.00 | 1.33 |
| Birth Order X Gender | | 1.32 | 1.08 | 0.89 | 0.41 |

[a]$p < .05$, $\omega^2 = 0.51$
[b]$p < .01$, $\omega^2 = .0.66$
[c]$p < .05$, $\omega^2 = 0.40$

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